URS

HAND DELIVERED

October 4, 2005

Mr. J. Robert Brown
Engineering Services Division
Bureau of Air Quality
2600 Bull Street
Columbia, South Carolina 29201

Re: Bowater PSD Permit Application for Kraft Fiberline Optimization
Information Request for Completeness
Permit No. 2440-0005

Dear Mr. Brown:

Bowater Coated and Specialty Papers Division (Bowater) received your above referenced information request (reproduced in Attachment 1) dated September 14, 2005. Bowater has requested I forward the response to your attention.

DHEC request No. 1:
Method for calculating emission increase.

(a) Determining baseline actual emissions: The facility has proposed using allowable production rates in lieu of actual production rates for the baseline actual emissions. The facility is required to follow the procedures of (b)(4) "Baseline actual emissions" in determining actual emissions. The requirement is to use the "average rate, in tons per year, at which the emissions unit actually emitted the pollutant during any consecutive 24-month period…"
(b) There are two options for calculating emission increases once the baseline emissions have been established:
- Baseline actual to potential test, or
- Baseline actual emissions to future actual test. If the facility chooses to use this test to determine if a significant emission increase has occurred, the procedures outlined in (b)(41)(i) "Projected actual emissions" need to be used.

Please resubmit the calculations based on the baseline actual emissions method and the use of the actual to potential test or the actual to future actual test.

Bowater response No. 1:

(a) Baseline actual emissions calculated following the procedures of (b)(4) are presented in Attachment 2.
(b) Projected actual emissions calculated following the procedures of (b)(41) are presented in Attachment 2. As provided in (b)(41)(ii), production that could be reasonably accommodated prior to the proposed change has been excluded from

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the projected actual emissions. The production that could be reasonably accommodated has been determined by averaging the three highest monthly maximum daily production rates for each emission unit during the baseline period. The production rates during the baseline period are presented in Attachment 3.

A revised table showing the net change in emissions is presented in Attachment 4.

DHEC request No. 2:
7.1(d)(1)(C) requires the facility obtain offsets and that they be federally enforceable by the time the modification commences operation. The application does not fully address the offset process, which includes where the facility is getting the offsets and how to make these offsets federally enforceable.

Bowater response No. 2:
Bowater and the Department discussed the source of the NO_X offsets and the requirement of making the NO_X offsets federally enforceable during the pre-application meeting on June 10, 2005.

Bowater plans to obtain the required NO_X offsets for the project from the Celanese facility in Rock Hill (permit no. 2440-0010). Bowater and Celanese are currently negotiating the price of the offsets through a third party and expect to reach an agreement well before the modification commences operation.

During the meeting, it was suggested that the Department modify the Title V Operating Permits for both Bowater and Celanese to make the offsets federally enforceable. However, Bowater acknowledges that it is the responsibility of the Department to determine how the offsets will be made federally enforceable under the South Carolina regulations.

DHEC request No. 3:
7.1(d)(1)(B) requires the facility certify that all sources are in compliance with all applicable emission limits and standards under the CAA. The application does not contain the certification statement.

Bowater response No. 3:
A certification statement is included in Attachment 5.

DHEC request No. 4:
7.1(d)(1)(D) requires the offsets provide a positive net air quality benefit in accordance with 40 CFR 51 Appendix S. The application does not address this issue.

Bowater response No. 4:
The Bowater facility is located in the Charlotte-Gastonia-Rock Hill 8-hour ozone non-attainment area. The Southern Oxidants Study and other research have demonstrated that

ozone formation in the Southeast is limited by the amount of NO_X available for photo-chemical reactions with the naturally abundant VOC's in the Southeast.

DHEC request No. 5:
The Part 1 Permit Application Form did not contain the "company official signature", in this case, the Responsible Official under the Part 70 Regulation. Please resubmit the Part I form with the appropriate signature.

Bowater response No. 5:
The appropriate signature was included on the Part I Application Forms originally submitted on July 26, 2005. At the request of the Department, additional copies were submitted on July 27, 2005 that were not signed, since the signed original had already been submitted on July 26, 2005. Attachment 6 contains re-signed Part I application forms for the Departments records.

If you have additional questions regarding this submittal please contact Dale Herendeen of Bowater at (803) 981-8009, Jacquelyn Taylor of Bowater at (864) 981-8759, or me at (864) 527-4734.

Sincerely,

Steven R. Moore
URS Corporation

cc: Elizabeth Basil – DHEC
Dale Herendeen – Bowater
Jacquelyn Taylor – Bowater

Attachment 1
September 14, 2005 Information Request for Completeness

September 14, 2005

Dale Herendeen
Bowater Coated and Specialty Papers Division
5300 Cureton Ferry Road
Catawba SC 29704

Re: Bowater PSD Permit Application for Kraft Fiberline Optimization
Information Request for Completeness
Permit No. 2440-0005

Dear Mr. Herendeen:

The Bureau of Air Quality received on July 26, 2005, a Prevention of Significant Deterioration (PSD) project application for the Fiberline Optimization project. The following information is required for a completeness review/determination under 61-62.5 Standard No. 7 (PSD) and Standard No. 7.1 (NSR).

1. Method for calculating emission increases.

   (a) Determining baseline actual emissions: The facility has proposed using allowable production rates in lieu of actual production rates for the baseline actual emissions. The facility is required to follow the procedures of (b)(4) "Baseline actual emissions" in determining actual emissions. The requirement is to use the "average rate, in tons per year, at which the emissions unit actually emitted the pollutant during any consecutive 24-month period..."

   (b) There are two options for calculating emission increases once the baseline emissions have been established:

   - Baseline actual emissions to potential test, or
   - Baseline actual emissions to future actual test. If the facility chooses to use this test to determine if a significant emissions increase has occurred, the procedures outlined in (b)(41)(i)"Projected actual emissions" need to be used.

   Please resubmit the calculations based on the baseline actual emissions method and the use of the actual to potential test or the actual to future actual test.

2. 7.1(d)(1)(C) requires the facility obtain offsets and that they be federally enforceable by the time the modification commences operation. The application does not fully address the offset process, which includes where the facility is getting the offsets and how to make these offsets federally enforceable.

3. 7.1(d)(1)(B) requires the facility certify that all sources are in compliance with all applicable emission limits and standards under the CAA. The application does not contain the certification statement.

4. 7.11(d)(1)(D) requires the offsets provide a positive net air quality benefit in accordance with 40CFR51 Appendix S. The application does not address this issue.
5. The Part I Permit Application Form did not contain the "company official signature", in this case, the Responsible Official under the Part 70 Regulation. Please resubmit the Part I form with the appropriate signature.

Please submit the requested information within thirty days of receipt of this letter. Should you have any questions or comments, or if I can be of assistance, you can contact me at (803) 898-4129, or by email at brownjr@dhec.sc.gov.

Sincerely,

Jj Bail for Bob Brown

J Robert "Bob" Brown
Engineering Services Division
Bureau of Air Quality

cc: Jim Little, EPA Region 4
URS
DASM, Region III, Lancaster EQC District
Permit File: 2440-0005

Attachment 2
Revised Baseline Actual Emissions and Projected Actual Emissions

C.1 Kraft Mill Continuous Digester Chip Bin (HVLC System)

Baseline actual production = 1,458 ADTUP/day and 532,170 ADTUP/yr

Current reasonably accommodated production = 1,793 ADTUP/day and 654,445 ADTUP/yr

Additional reasonably accommodated production = 1,793 ADTUP/day – 1,458 ADTUP/day
= 335 ADTUP/day and 122,275 ADTUP/yr

Projected actual production = 1,825 ADTUP/day and 666,125 ADTUP/yr

C.1.1 Sulfur Dioxide (SO_2) Emissions

Emission factor from NCASI TB 858 for total TRS (as S) = 1.5E-01 lb/ADTUP (live steam)

Combination boiler TRS to SO_2 conversion efficiency = 100%

Emission factor = 1.5E-01 lb S/ADTUP × 64 lb SO_2/32 lb S = 0.30 lb SO_2/ADTUP

Baseline actual emissions:

1,458 ADTUP/day × 0.30 lb/ADTP × 1 day/24 hr = 18.23 lbs/hr

532,170 ADTUP/yr × 0.30 lb/ADTP × 1 ton/2,000 lb = 79.83 tons/yr

Additional reasonably accommodated emissions:

335 ADTUP/day × 0.30 lb/ADTP × 1 day/24 hr = 4.2 lbs/hr

122,275 ADTUP/yr × 0.30 lb/ADTP × 1 ton/2,000 lb = 18.3 tons/yr

Projected actual emissions:

1,825 ADTUP/day × 0.30 lb/ADTP × 1 day/24 hr = 23 lbs/hr

666,125 ADTUP/yr × 0.30 lb/ADTP × 1 ton/2,000 lb = 100 tons/yr

C.1.2 Volatile Organic Compound (VOC) Emissions

Emission factor from NCASI TB 884 = 0.46 lb/ton chip

Combination boiler destruction efficiency = 98%

Assume 50% yield, 1 ton chip = 0.5 ton ADTUP

Emission factor = 0.46 lb/ton chips × 1 ton chips/0.5 ADTP = 0.92 lb/ADTUP

Baseline actual emissions:

1, 458 ADTUP/day × 0.92 lb/ADTP × 1 day/24 hr × (1 – 0.98) = 1.12 lbs/hr

532,170 ADTUP/yr × 0.92 lb/ADTP × 1 ton/2,000 lb × (1 – 0.98) = 4.9 tons/yr

Additional reasonably accommodated emissions:

335 ADTUP/day × 0.92 lb/ADTP × 1 day/24 hr × (1 – 0.98) = 0.26 lbs/hr

122,275 ADTUP/yr × 0.92 lb/ADTP × 1 ton/2,000 lb × (1 – 0.98) = 1.12 tons/yr

Projected actual emissions:

1,825 ADTUP/day × 0.92 lb/ADTP × 1 day/24 hr × (1 – 0.98) = 1.4 lbs/hr

666,125 ADTUP/yr × 0.92 lb/ADTP × 1 ton/2,000 lb × (1 – 0.98) = 6.1 tons/yr

C.1.3 Hazardous Air Pollutant (Methanol) Emissions

Emission factor from NCASI TB 858 = 1.5E-02 lb/ADTUP

Combination boiler destruction efficiency = 98%

Baseline actual emissions:

1,458 ADTUP/day × 1.5E-02 lb/ADTP × 1 day/24 hr × (1 – 0.98) = 1.8E-02lb/hr

532,170 ADTUP/yr × 1.5E-02 lb/ADTP × 1 ton/2,000 lb × (1 – 0.98) = 8.0E-02 tons/yr

Additional reasonably accommodated emissions:

335 ADTUP/day × 1.5E-02 lb/ADTP × 1 day/24 hr × (1 – 0.98) = 4.2E-03 lb/hr

122,275 ADTUP/yr × 1.5E-02 lb/ADTP × 1 ton/2,000 lb × (1 – 0.98) = 1.8E-02 tons/yr

Projected actual emissions:

1,825 ADTUP/day × 1.5E-02 lb/ADTP × 1 day/24 hr × (1 – 0.98) = 2.3E-02 lb/hr

666,125 ADTUP/yr × 1.5E-02 lb/ADTP × 1 ton/2,000 lb × (1 – 0.98) = 1.0E-01 tons/yr

C.2 Kraft Mill Continuous Digester & Blow Tank (HVLC System)

Baseline actual production = 1,458 ADTUP/day and 532,170 ADTUP/yr

Current reasonably accommodated production = 1,793 ADTUP/day and 654,445 ADTUP/yr

Additional reasonably accommodated production = 1,793 ADTUP/day – 1,458 ADTUP/day
= 335 ADTUP/day and 122,275 ADTUP/yr

Projected actual production = 1,825 ADTUP/day and 666,125 ADTUP/yr

C.2.1 Sulfur Dioxide (SO_2) Emissions

Emission factors from NCASI TB 858 for total TRS (as S):

Blow Gases = 1.9E-02 lb/ADTUP

Relief Gases = 4.2E-02 lb/ADTUP

TOTAL = 0.061 lb/ADTUP

Combination boiler TRS to SO_2 conversion efficiency = 100%

Emission factor = 0.061 lb S/ADTUP × 64 lbs SO_2/32 lb S = 0.122 lb SO_2/ADTUP

Baseline actual emissions:

1,458 ADTUP/day × 0.122 lb/ADTP × 1 day/24 hr = 7.4 lbs/hr

532,170 ADTUP/yr × 0.122 lb/ADTP × 1 ton/2,000 lb = 32.5 tons/yr

Additional reasonably accommodated emissions:

335 ADTUP/day × 0.122 lb/ADTP × 1 day/24 hr = 1.7 lbs/hr

122,275 ADTUP/yr × 0.122 lb/ADTP × 1 ton/2,000 lb = 7.5 tons/yr

Projected actual emissions:

1,825 ADTUP/day × 0.122 lb/ADTP × 1 day/24 hr = 9.3 lbs/hr

666,125 ADTUP/yr × 0.122 lb/ADTP × 1 ton/2,000 lb = 41 tons/yr

C.2.2 Volatile Organic Compound (VOC) Emissions

Emission factor from NCASI TB 884 = 0.71 lb/ADTUP (Pulping & Evaporator)

Methanol emission factors from NCASI TB 858:

Evaporator Only = 0.022 lb/ADTUP

Pulping + Evaporator = 0.043 lb/ADTUP

Combination boiler destruction efficiency = 98%

VOC Emission factor = 0.71 lb/ADTUP × [(0.043 – 0.022) ÷ 0.043] lb/ADTUP = 0.35 lb/ADTUP

Baseline actual emissions:

1,458 ADTUP/day × 0.35 lb/ADTP × 1 day/24 hr × (1 – 0.98) = 0.43 lb/hr

532,170 ADTUP/yr × 0.35 lb/ADTP × 1 ton/2,000 lb × (1 – 0.98) = 1.86 tons/yr

Additional reasonably accommodated emissions:

335 ADTUP/day × 0.35 lb/ADTP × 1 day/24 hr × (1 – 0.98) = 0.1 lb/hr

122,275 ADTUP/yr × 0.35 lb/ADTP × 1 ton/2,000 lb × (1 – 0.98) = 0.43 tons/yr

Projected actual emissions:

1,825 ADTUP/day × 0.35 lb/ADTP × 1 day/24 hr × (1 – 0.98) = 0.53 lb/hr

666,125 ADTUP/yr × 0.35 lb/ADTP × 1 ton/2,000 lb × (1 – 0.98) = 2.3 tons/yr

C.2.3 Hazardous Air Pollutant (Methanol) Emissions

Emission factor from NCASI TB 858:

Blow Gases = 7.9E-03 lb/ADTUP

Relief Gases = 1.4E-03 lb/ADTUP

TOTAL = 9.3E-03 lb/ADTUP

Combination boiler destruction efficiency = 98%

Baseline actual emissions:

1,458 ADTUP/day × 9.3E-03 lb/ADTP × 1 day/24 hr × (1 – 0.98) = 0.011 lb/hr

532,170 ADTUP/yr × 9.3E-03 lb/ADTP × 1 ton/2,000 lb × (1 – 0.98) = 0.05 ton/yr

Additional reasonably accommodated emissions:

335 ADTUP/day × 9.3E-03 lb/ADTP × 1 day/24 hr × (1 – 0.98) = 0.003 lb/hr

122,275 ADTUP/yr × 9.3E-03 lb/ADTP × 1 ton/2,000 lb × (1 – 0.98) = 0.011 ton/yr

Projected actual emissions:

1,825 ADTUP/day × 9.3E-03 lb/ADTP × 1 day/24 hr × (1 – 0.98) = 0.014 lb/hr

666,125 ADTUP/yr × 9.3E-03 lb/ADTP × 1 ton/2,000 lb × (1 – 0.98) = 0.062 ton/yr

C.3 Kraft Mill Turpentine Recovery System (LVHC System)

Baseline actual production = 1,458 ADTUP/day and 532,170 ADTUP/yr

Current reasonably accommodated production = 1,793 ADTUP/day and 654,445 ADTUP/yr

Additional reasonably accommodated production = 1,793 ADTUP/day – 1,458 ADTUP/day
= 335 ADTUP/day and 122,275 ADTUP/yr

Projected actual production = 1,825 ADTUP/day and 666,125 ADTUP/yr

C.3.1 Sulfur Dioxide (SO_2) Emissions

Emission factors from NCASI TB 858 for total TRS (as S) = 3.0E-03 lb/ADTUP

Combination boiler TRS to SO_2 conversion efficiency = 100%

LVHC caustic scrubber TRS removal efficiency = 50%

Emission factor = 3.0E-03 lb S/ADTUP × 64 lb SO_2/32 lb S × (1 – 0.50) = 3.0E-03 lb SO_2 /ADTUP

Baseline actual emissions:

1,458 ADTUP/day × 3.0E-03 lb/ADTUP × 1 day/24 hr = 0.18 lb/hr

532,170 ADTUP/yr × 3.0E-03 lb/ADTUP × 1 ton/2,000 lb = 0.80ton/yr

Additional reasonably accommodated emissions:

335 ADTUP/day × 3.0E-03 lb/ADTUP × 1 day/24 hr = 0.04 lb/hr

122,275 ADTUP/yr × 3.0E-03 lb/ADTUP × 1 ton/2,000 lb = 0.18 ton/yr

Projected actual emissions:

1,825 ADTUP/day × 3.0E-03 lb/ADTUP × 1 day/24 hr = 0.23 lb/hr

666,125 ADTUP/yr × 3.0E-03 lb/ADTUP × 1 ton/2,000 lb = 1.0 ton/yr

C.3.2 Volatile Organic Compound (VOC) Emissions

Assume VOC = methanol

Emission factor from NCASI TB 858: Methanol = 9.2E-04 lb/ADTUP

Combination boiler destruction efficiency = 98%

Baseline actual emissions:

1458 ADTUP/day × 9.2E-04 lb/ADTP × (1 – 0.98) × 1 day/24 hr = 0.0011 lb/hr

532,170 ADTUP/yr × 9.2E-04 lb/ADTP × (1 – 0.98) × 1 ton/2,000 lb = 0.0049 ton/yr

Additional reasonably accommodated emissions:

335 ADTUP/day × 9.2E-04 lb/ADTP × (1 – 0.98) × 1 day/24 hr = 0.00026 lb/hr

122,275 ADTUP/yr × 9.2E-04 lb/ADTP × (1 – 0.98) × 1 ton/2,000 lb = 0.001 ton/yr

Projected actual emissions:

1,825 ADTUP/day × 9.2E-04 lb/ADTP × (1 – 0.98) × 1 day/24 hr = 0.0014 lb/hr

666,125 ADTUP/yr × 9.2E-04 lb/ADTP × (1 – 0.98) × 1 ton/2,000 lb = 0.0061 ton/yr

C.3.3 Hazardous Air Pollutant (Methanol) Emissions

Emission factor from NCASI TB 858 = 9.2E-04 lb/ADTUP

Combination boiler destruction efficiency = 98%

Baseline actual emissions:

1,458 ADTUP/day × 9.2E-04 lb/ADTP × (1 – 0.98) × 1 day/24 hr = 0.0011 lb/hr

532,170 ADTUP/yr × 9.2E-04 lb/ADTP × (1 – 0.98) × 1 ton/2,000 lb = 0.0049 ton/yr

Additional reasonably accommodated emissions:

335 ADTUP/day × 9.2E-04 lb/ADTP × (1 – 0.98) × 1 day/24 hr = 0.00026 lb/hr

122,275 ADTUP/yr × 9.2E-04 lb/ADTP × (1 – 0.98) × 1 ton/2,000 lb = 0.001 ton/yr

Projected actual emissions:

1,825 ADTUP/day × 9.2E-04 lb/ADTP × (1 – 0.98) × 1 day/24 hr = 0.0014 lb/hr

666,125 ADTUP/yr × 9.2E-04 lb/ADTP × (1 – 0.98) × 1 ton/2,000 lb = 0.0061 ton/yr

C.4 Kraft Mill Pressure Diffusion Washer

Baseline actual production = 1,458 ADTUP/day and 532,170 ADTUP/yr

Current reasonably accommodated production = 1,793 ADTUP/day and 654,445 ADTUP/yr

Additional reasonably accommodated production = 1,793 ADTUP/day – 1,458 ADTUP/day
= 335 ADTUP/day and 122,275 ADTUP/yr

Projected actual production = 1,825 ADTUP/day and 666,125 ADTUP/yr

C.4.1 Sulfur Dioxide (SO_2) Emissions

Emission Factor from NCASI TB 858 for total TRS (as S) = 3.6E-02 lb/ADTUP

3.6E-02 lb S/ADTUP × 64 lb SO_2/32 lb S = 7.2E-02 lb SO_2 /ADTUP

Combination boiler TRS to SO_2 conversion efficiency = 100%

Baseline actual emissions:

1,458 ADTUP/day × 7.2E-02 lb/ADTP × 1 day/24 hr = 4.37 lbs/hr

532,170 ADTUP/yr × 7.2E-02 lb/ADTP × 1 ton/2,000 lb = 19.2 tons/yr

Additional reasonably accommodated emissions:

335 ADTUP/day × 7.2E-02 lb/ADTP × 1 day/24 hr = 1.01 lbs/hr

122,275 ADTUP/yr × 7.2E-02 lb/ADTP × 1 ton/2,000 lb = 4.4 tons/yr

Projected actual emissions:

1,825 ADTUP/day × 7.2E-02 lb/ADTP × 1 day/24 hr = 5.5 lbs/hr

666,125 ADTUP/yr × 7.2E-02 lb/ADTP × 1 ton/2,000 lb = 24 tons/yr

C.4.2 Volatile Organic Compound (VOC) Emissions

Emission factor from NCASI TB 884 = 0.13 lb/ADTP

Control efficiency = 98%

Baseline actual emissions:

1,458 ADTUP/day × 0.13 lb/ADTP × 1 day/24 hr × (1 – 0.98) = 0.16 lb/hr

532,170 ADTUP/yr × 0.13 lb/ADTP × 1 ton/2,000 lb × (1 – 0.98) = 0.69ton/yr

Additional reasonably accommodated emissions:

335 ADTUP/day × 0.13 lb/ADTP × 1 day/24 hr × (1 – 0.98) = 0.04 lb/hr

122,275 ADTUP/yr × 0.13 lb/ADTP × 1 ton/2,000 lb × (1 – 0.98) = 0.15 ton/yr

Projected actual emissions:

1,825 ADTUP/day × 0.13 lb/ADTP × 1 day/24 hr × (1 – 0.98) = 0.20 lb/hr

666,125 ADTUP/yr × 0.13 lb/ADTP × 1 ton/2,000 lb × (1 – 0.98) = 0.87 ton/yr

C.4.3 Hazardous Air Pollutant (Methanol) Emissions

Emission factor from NCASI TB 858 = 0.081 lb/ADTP

Control efficiency = 98%

Baseline actual emissions:

1,458 ADTUP/day × 0.081 lb/ADTP × 1 day/24 hr × (1 – 0.98) = 0.10 lb/hr

532,170 ADTUP/yr × 0.081 lb/ADTP × 1 ton/2,000 lb × (1 – 0.98) = 0.43 ton/yr

Additional reasonably accommodated emissions:

335 ADTUP/day × 0.081 lb/ADTP × 1 day/24 hr × (1 – 0.98) = 0.02 lb/hr

122,275 ADTUP/yr × 0.081 lb/ADTP × 1 ton/2,000 lb × (1 – 0.98) = 0.099 ton/yr

Projected actual emissions:

1,825 ADTUP/day × 0.081 lb/ADTP × 1 day/24 hr × (1 – 0.98) = 0.12 lb/hr

666,125 ADTUP/yr × 0.081 lb/ADTP × 1 ton/2,000 lb × (1 – 0.98) = 0.54 ton/yr

C.5 Kraft Mill Knotting and Screening

Baseline actual production = 1,458 ADTUP/day and 532,170 ADTUP/yr

Current reasonably accommodated production = 1,793 ADTUP/day and 654,445 ADTUP/yr

Additional reasonably accommodated production = 1,793 ADTUP/day – 1,458 ADTUP/day
= 335 ADTUP/day and 122,275 ADTUP/yr

Projected actual production = 1,825 ADTUP/day and 666,125 ADTUP/yr

C.5.1 Sulfur Dioxide (SO_2) Emissions

Emission factors from NCASI TB 858 for total TRS (as S):

Knotters = 1.3E-03 lb/ODTUP

Screens = 9.0E-04 lb/ODTUP

Deckers = 3.5E-02 lb/ADTUP

Pulp Storage Tanks = 4.2E-01 lb/hr/tank

Total TRS = [(1.3E-03 + 9.0E-04) lb/ODTUP × (0.9 ODT/1.0 ADT)] + 3.5E-02 lb/ADTUP + (4.2E-01 lb/hr/tank × 1 tank)

Total TRS = 3.70E-02 lb/ADTUP + 4.2E-01 lb/hr

Combination boiler TRS to SO_2 conversion efficiency = 100%

Emission factor = (3.70E-02 lb S/ADTUP + 4.2E-01 lb S/hr) × 64 lb SO_2/32 lb S =
7.40E-02 lb SO_2 /ADTUP + 8.4E-01 lb SO_2/hr

<u>Baseline actual emissions:</u>

(1,458 ADTUP/day × 7.40E-02 lb/ADTP × 1 day/24 hr) + 8.4E-01 lb/hr = 5.34 lbs/hr

[(532,170 ADTUP/yr × 7.40E-02 lb/ADTP) + (8.4E-01 lb/hr × 8,760 hr/yr)] × 1 ton/2,000 lb
= 23.4 tons/yr

<u>Additional reasonably accommodated emissions:</u>

(335 ADTUP/day × 7.40E-02 lb/ADTP × 1 day/24 hr) + 8.4E-01 lb/hr = 1.9lbs/hr

[(122,275 ADTUP/yr × 7.40E-02 lb/ADTP) + (8.4E-01 lb/hr × 8,760 hr/yr)] × 1 ton/2,000 lb
= 8.2 tons/yr

Projected actual emissions:

(1,825 ADTUP/day × 7.40E-02 lb/ADTP × 1 day/24 hr) + 8.4E-01 lb/hr = 6.5 lbs/hr

[(666,125 ADTUP/yr × 7.40E-02 lb/ADTP) + (8.4E-01 lb/hr × 8,760 hr/yr)] × 1 ton/2,000 lb
= 28 tons/yr

C.5.2 Volatile Organic Compound (VOC) Emissions

Emission factors from NCASI TB 884:

Knotters = 0.005 lb/ODTUP

Screens = 0.004 lb/ODTUP

Deckers = 0.077 lb/ADTUP

Pulp Storage Tanks = 4.84 lbs/hr/tank

Emission Factor = [(0.005 + 0.004) lb/ODTUP × (0.9 ODT/1.0 ADT)] + 0.077 lb/ADTUP +
(4.84 lbs/hr/tank × 1 tank)

Emission Factor = 8.5E-02 lb/ADTUP + 4.84 lb/hr

Control efficiency = 98%

Baseline actual emissions:

[(1,458 ADTUP/day × 8.5E-02 lb/ADTUP × 1 day/24 hr) + 4.84 lb/hr] × (1 – 0.98) = 0.2 lb/hr

[(532,170 ADTUP/yr × 8.5E-02 lb/ADTUP) + (4.84 lb/hr × 8,760 hr/yr)] × 1 ton/2,000 lb
× (1 – 0.98) = 0.87 ton/yr

Additional reasonably accommodated emissions:

[(335 ADTUP/day × 8.5E-02 lb/ADTUP × 1 day/24 hr) + 4.84 lb/hr] × (1 – 0.98) = 0.12 lb/hr

[(122,275 ADTUP/yr × 8.5E-02 lb/ADTUP) + (4.84 lb/hr × 8,760 hr/yr)] × 1 ton/2,000 lb
× (1 – 0.98) = 0.53 ton/yr

Projected actual emissions:

[(1,825 ADTUP/day × 8.5E-02 lb/ADTUP × 1 day/24 hr) + 4.84 lb/hr] × (1 – 0.98) = 0.2 lb/hr

[(666,125 ADTUP/yr × 8.5E-02 lb/ADTUP) + (4.84 lb/hr × 8,760 hr/yr)] × 1 ton/2,000 lb
× (1 – 0.98) = 1.0 ton/yr

C.5.3 Hazardous Air Pollutant (Methanol) Emissions

Emission factors from NCASI TB 858:

Knotters = 2.5E-02 lb/ODTUP

Screens = 2.3E-01 lb/ODTUP

Deckers = 3.5E-02 lb/ADTUP

Pulp Storage Tanks = 4.9E-01 lb/hr/tank

Emission Factor = [(2.5E-02 + 2.3E-01) lb/ODTUP × (0.9 ODT/1.0 ADT)]
+ 3.5E-02 lb/ADTUP + (4.9E-01 lb/hr/tank × 1 tank)

Emission Factor = 2.65E-01 lb/ADTUP + 4.9E-01 lb/hr

Control efficiency = 98%

Baseline actual emissions:

[(1,458 ADTUP/day × 2.65E-01 lb/ADTUP × 1 day/24 hr) + 4.9E-01 lb/hr] × (1 – 0.98)
= 0.33 lb/hr

[(532,170 ADTUP/yr × 2.65E-01 lb/ADTUP) + (4.9E-01 lb/hr × 8,760 hr/yr)] × 1 ton/2,000 lb
× (1 – 0.98) = 1.45 tons/yr

Additional reasonably accommodated emissions:

[(335 ADTUP/day × 2.65E-01 lb/ADTUP × 1 day/24 hr) + 4.9E-01 lb/hr] × (1 – 0.98)
= 0.08 lb/hr

[(122,275 ADTUP/yr × 2.65E-01 lb/ADTUP) + (4.9E-01 lb/hr × 8,760 hr/yr)] × 1 ton/2,000 lb
× (1 – 0.98) = 0.37 tons/yr

Projected actual emissions:

[(1,825 ADTUP/day × 2.65E-01 lb/ADTUP × 1 day/24 hr) + 4.9E-01 lb/hr] × (1 – 0.98)

= 0.41 lb/hr

[(666,125 ADTUP/yr × 2.65E-01 lb/ADTUP) + (4.9E-01 lb/hr × 8,760 hr/yr)] × 1 ton/2,000 lb

× (1 – 0.98) = 1.8 tons/yr

C.6 Kraft Mill Oxygen Delignification

Baseline actual production = 1,458 ADTUP/day and 532,170 ADTUP/yr

Current reasonably accommodated production = 1,793 ADTUP/day and 654,445 ADTUP/yr

Additional reasonably accommodated production = 1,793 ADTUP/day – 1,458 ADTUP/day
= 335 ADTUP/day and 122,275 ADTUP/yr

Projected actual production = 1,825 ADTUP/day and 666,125 ADTUP/yr

C.6.1 Sulfur Dioxide (SO_2) Emissions

Emission factor from NCASI TB 858 for total TRS (as S) = 5.8E-03 lb/ADTUP

Combination boiler TRS to SO_2 conversion efficiency = 100%

Emission Factor = 5.8E-03 lb S/ADTUP × 64 lb SO_2/32 lb S = 1.16E-02 lb SO_2 /ADTUP

Baseline actual emissions:

1,458 ADTUP/day × 1.16E-02 lb/ADTP × 1 day/24 hr = 0.70 lb/hr

532,170 ADTUP/yr × 1.16E-02 lb/ADTP × 1 ton/2,000 lb = 3.08 tons/yr

Additional reasonably accommodated emissions:

335 ADTUP/day × 1.16E-02 lb/ADTP × 1 day/24 hr = 0.16 lb/hr

122,275 ADTUP/yr × 1.16E-02 lb/ADTP × 1 ton/2,000 lb = 0.71 tons/yr

Projected actual emissions:

1,825 ADTUP/day × 1.16E-02 lb/ADTP × 1 day/24 hr = 0.88 lb/hr

666,125 ADTUP/yr × 1.16E-02 lb/ADTP × 1 ton/2,000 lb = 3.9 tons/yr

C.6.2 Carbon Monoxide (CO) Emissions

Emission factor from NCASI TB 884 = 0.045 lb/ADTP

Baseline actual emissions:

1,458 ADTUP/day × 0.045 lb/ADTP × 1 day/24 hr = 2.7 lbs/hr

532,170 ADTUP/yr × 0.045 lb/ADTP × 1 ton/2,000 lb = 12 tons/yr

Additional reasonably accommodated emissions:

335 ADTUP/day × 0.045 lb/ADTP × 1 day/24 hr = 0.63 lbs/hr

122,275 ADTUP/yr × 0.045 lb/ADTP × 1 ton/2,000 lb = 2.8 tons/yr

Projected actual emissions:

1,825 ADTUP/day × 0.045 lb/ADTP × 1 day/24 hr = 3.4 lbs/hr

666,125 ADTUP/yr × 0.045 lb/ADTP × 1 ton/2,000 lb = 15 tons/yr

C.6.3 Volatile Organic Compound (VOC) Emissions

Emission factor from NCASI TB 884= 0.20 lb/ADTP

Control efficiency = 98%

Baseline actual emissions:

1,458 ADTUP/day × 0.20 lb/ADTP × 1 day/24 hr × (1 – 0.98) = 0.24 lb/hr

532,170 ADTUP/yr × 0.20 lb/ADTP × 1 ton/2,000 lb × (1 – 0.98) = 1.06 tons/yr

Additional reasonably accommodated emissions:

335ADTUP/day × 0.20 lb/ADTP × 1 day/24 hr × (1 – 0.98) = 0.06 lb/hr

122,275 ADTUP/yr × 0.20 lb/ADTP × 1 ton/2,000 lb × (1 – 0.98) = 0.24 tons/yr

Projected actual emissions:

1,825 ADTUP/day × 0.20 lb/ADTP × 1 day/24 hr × (1 – 0.98) = 0.30 lb/hr

666,125 ADTUP/yr × 0.20 lb/ADTP × 1 ton/2,000 lb × (1 – 0.98) = 1.3 tons/yr

C.6.4 Hazardous Air Pollutant (Methanol) Emissions

Emission factor from NCASI TB 858 = 0.98 lb/ADTP

Control efficiency = 98%

Baseline actual emissions:

1,458 ADTUP/day × 0.98 lb/ADTP × 1 day/24 hr × (1 – 0.98) = 1.19 lbs/hr

532,170 ADTUP/yr × 0.98 lb/ADTP × 1 ton/2,000 lb × (1 – 0.98) = 5.22 tons/yr

Additional reasonably accommodated emissions:

335 ADTUP/day × 0.98 lb/ADTP × 1 day/24 hr × (1 – 0.98) = 0.27 lbs/hr

122,275 ADTUP/yr × 0.98 lb/ADTP × 1 ton/2,000 lb × (1 – 0.98) = 1.2 tons/yr

Projected actual emissions:

1,825 ADTUP/day × 0.98 lb/ADTP × 1 day/24 hr × (1 – 0.98) = 1.5 lbs/hr

666,125 ADTUP/yr × 0.98 lb/ADTP × 1 ton/2,000 lb × (1 – 0.98) = 6.5 tons/yr

D.1 Kraft Mill ECF Bleaching System

Baseline actual production = 1,374 ADTBP/day and 501,510 ADTBP/yr

Current reasonably accommodated production = 1,739 ADTBP/day and 634,735 ADTBP/yr

Additional reasonably accommodated production = 1,739 ADTBP/day – 1,374 ADTBP/day
= 365 ADTBP/day and 133,225 ADTBP/yr

Projected actual production = 1,752 ADTBP/day and 639,480 ADTBP/yr

D.1.1 Carbon Monoxide (CO) Emissions

Emission factor from NCASI TB 884 = [0.18 × percent ClO_2 applied] + 0.45 lb/ODTUP

Percent ClO_2 applied = 49 lb/ton ÷ 2,000 lb/ton × 100 = 2.45

Emission factor = [0.18 × 2.45] + 0.45 = 0.891 lb/ODTUP × 0.9 ODT/ADT = 0.802 lb/ADTUP

[note emission factor for CO uses unbleached kraft mill production]

Baseline actual emissions:

1,458 ADTUP/day × 0.802 lb/ADTUP × 1 day/24 hr = 48.7 lbs/hr

532,170 ADTUP/yr × 0.802 lb/ADTUP × 1 ton/2,000 lb = 213 tons/yr

Additional reasonably accommodated emissions:

335 ADTUP/day × 0.802 lb/ADTUP × 1 day/24 hr = 11.2 lbs/hr

122,275 ADTUP/yr × 0.802 lb/ADTUP × 1 ton/2,000 lb = 49 tons/yr

Projected actual emissions:

1,825 ADTUP/day × 0.802 lb/ADTUP × 1 day/24 hr = 61.0 lbs/hr

666,125 ADTUP/yr × 0.802 lb/ADTUP × 1 ton/2,000 lb = 267 tons/yr

D.1.2 Volatile Organic Compound (VOC) Emissions

Emission factor from NCASI TB 884 = 0.050 lb/ODTUP

Emission factor = 0.050 lb/ODTUP × 0.9 ODT/ADT = 0.045 lb/ADTUP

[note emission factor for VOC uses unbleached kraft mill production]

Baseline actual emissions:

1,458 ADTUP/day × 0.045 lb/ADTUP × 1 day/24 hr = 2.7 lbs/hr

532,170 ADTUP/yr × 0.045 lb/ADTUP × 1 ton/2,000 lb = 12.0 tons/yr

Additional reasonably accommodated emissions:

335 ADTUP/day × 0.045 lb/ADTUP × 1 day/24 hr = 0.63lbs/hr

122,275 ADTUP/yr × 0.045 lb/ADTUP × 1 ton/2,000 lb = 2.8 tons/yr

Projected actual emissions:

1,825 ADTUP/day × 0.045 lb/ADTUP × 1 day/24 hr = 3.4 lbs/hr

666,125 ADTUP/yr × 0.045 lb/ADTUP × 1 ton/2,000 lb = 15 tons/yr

D.1.3 Hazardous Air Pollutant (Methanol) Emissions

Emission factor from NCASI TB 858 = 0.13 lb/ADTBP

Baseline actual emissions:

1,374 ADTBP/day × 0.13 lb/ADTBP × 1 day/24 hr = 7.4 lbs/hr

501,510 ADTBP/yr × 0.13 lb/ADTBP × 1 ton/2,000 lb = 32.6 tons/yr

Additional reasonably accommodated emissions:

365 ADTBP/day × 0.13 lb/ADTBP × 1 day/24 hr = 2.0 lbs/hr

133,225 ADTBP/yr × 0.13 lb/ADTBP × 1 ton/2,000 lb = 8.7 tons/yr

Projected actual emissions:

1,752 ADTBP/day × 0.13 lb/ADTBP × 1 day/24 hr = 9.5 lbs/hr

639,480 ADTBP/yr × 0.13 lb/ADTBP × 1 ton/2,000 lb = 42 tons/yr

D.1.4 Total Reduced Sulfur (TRS) Emissions

Emission factors from NCASI TB 858 for total TRS (as S) = 2.8E-03 lb/ADTBP

Baseline actual emissions:

1,374 ADTBP/day × 2.8E-03 lb/ADTBP × 1 day/24 hr = 0.16 lb/hr

501,510 ADTBP/yr × 2.8E-03 lb/ADTBP × 1 ton/2,000 lb = 0.70 ton/yr

Additional reasonably accommodated emissions:

365 ADTBP/day × 2.8E-03 lb/ADTBP × 1 day/24 hr = 0.04 lb/hr

133,225 ADTBP/yr × 2.8E-03 lb/ADTBP × 1 ton/2,000 lb = 0.19 ton/yr

Projected actual emissions:

1,752 ADTBP/day × 2.8E-03 lb/ADTBP × 1 day/24 hr = 0.20 lb/hr

639,480 ADTBP/yr × 2.8E-03 lb/ADTBP × 1 ton/2,000 lb = 0.90 ton/yr

E.1 Kraft Mill Evaporator Set No. 1

Evaporator Set No. 1 production = 28% of current total evaporator capacity

Baseline actual production = 1,458 ADTUP/day × 0.28 = 408 ADTUP/day

Current reasonably accommodated production = 1,793 ADTUP/day × 0.28 = 502 ADTUP/day

Additional reasonably accommodated production = 502 ADTUP/day – 408 ADTUP/day
= 94 ADTUP/day

Projected actual production = 620 ADTUP/day

E.1.1 Sulfur Dioxide (SO_2) Emissions

Emission factor from 2001 PSD permit application = 3.28 lb/ADTUP (September 1996 stack test)

LVHC caustic scrubber removal efficiency = 50%

Emission factor = 3.28 lb/ADTUP × (1 – 0.50) = 1.64 lb SO_2/ADTUP

Baseline actual emissions:

408 ADTUP/day × 1.64 lb/ADTUP × 1 day/24 hr = 27.9 lbs/hr

27.9 lbs/hr × 8,760 hr/yr × 1 ton/2,000 lb = 122 tons/yr

Additional reasonably accommodated emissions:

94 ADTUP/day × 1.64 lb/ADTUP × 1 day/24 hr = 6.42 lbs/hr

6.42 lbs/hr × 8,760 hr/yr × 1 ton/2,000 lb = 28.1 tons/yr

Projected actual emissions:

620 ADTUP/day × 1.64 lb/ADTUP × 1 day/24 hr = 42.4 lbs/hr

42.4 lbs/hr × 8,760 hr/yr × 1 ton/2,000 lb = 186 tons/yr

E.1.2 Volatile Organic Compound (VOC) Emissions

Emission factor from 2001 PSD permit application = 0.49 lb/ADTUP (September 1996 stack test)

Combination boiler destruction efficiency = 98%

Baseline actual emissions:

408 ADTUP/day × 0.49 lb/ADTUP × (1 – 0.98) × 1 day/24 hr = 0.17 lb/hr

0.17 lbs/hr × 8,760 hr/yr × 1 ton/2,000 lb = 0.74 tons/yr

Additional reasonably accommodated emissions:

94 ADTUP/day × 0.49 lb/ADTUP × (1 – 0.98) × 1 day/24 hr = 0.038 lb/hr

0.038 lbs/hr × 8,760 hr/yr × 1 ton/2,000 lb = 0.17 tons/yr

Projected actual emissions:

620 ADTUP/day × 0.49 lb/ADTUP × (1 – 0.98) × 1 day/24 hr = 0.25 lb/hr

0.25 lbs/hr × 8,760 hr/yr × 1 ton/2,000 lb = 1.1 tons/yr

E.1.3 Hazardous Air Pollutant (Methanol) Emissions

Emission factor from 2001 PSD permit application = 0.49 lb/ADTUP (September 1996 stack test)

Combination boiler destruction efficiency = 98%

Baseline actual emissions:

408 ADTUP/day × 0.49 lb/ADTUP × (1 – 0.98) × 1 day/24 hr = 0.17 lb/hr

0.17 lbs/hr × 8,760 hr/yr × 1 ton/2,000 lb = 0.74 tons/yr

Additional reasonably accommodated emissions:

94 ADTUP/day × 0.49 lb/ADTUP × (1 – 0.98) × 1 day/24 hr = 0.038 lb/hr

0.038 lbs/hr × 8,760 hr/yr × 1 ton/2,000 lb = 0.17 tons/yr

Projected actual emissions:

620 ADTUP/day × 0.49 lb/ADTUP × (1 – 0.98) × 1 day/24 hr = 0.25 lb/hr

0.25 lbs/hr × 8,760 hr/yr × 1 ton/2,000 lb = 1.1 tons/yr

E.2 New 68% Black Liquor Storage Tank

New 68% (heavy/strong) black liquor storage tank

E.2.1 Volatile Organic Compound (VOC) Emissions (Method 25/25A as C)

Emission factor from NCASI TB 884 = 0.11 lb/hr/tank

Potential emissions:

1 tank × 0.11 lb//hr/tank = 0.11 lbs/hr

0.11 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 0.48 tons/yr

E.2.2 Total Reduced Sulfur (TRS) Emissions (as H_2S)

Emission factor from NCASI TB 849 = 0.18 lb/hr/tank

Potential emissions:

1 tank × 0.18 lb//hr/tank = 0.18 lbs/hr

0.18 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 0.79 tons/yr

F.1 No. 3 Recovery Furnace

Baseline actual production = 1,613 TBLS/day and 588,745 TBLS/yr

Current reasonably accommodated production = 1,816 TBLS/day and 662,840 TBLS/yr

Additional reasonable accommodated production = 1,816 TLS/day – 1,613 TBLS/day
= 203 TBLS/day and 74,095 TBLS/yr

Projected actual production = 2,040 TBLS/day and 744,600 TBLS/yr

F.1.1 Particulate Matter (PM/PM_{10}) Emissions

NCASI TB 884 emission factors = 0.37 lb/TBLS (filterable)
= 0.063 lb/TBLS (condensable)

December 2, 2003 compliance test = 29.4 lb/hr × hr/73.5 TBLS = 0.40 lb/TBLS (filterable)

August 4, 2004 compliance test = 23 lb/hr × hr/68 TBLS = 0.34 lb/TBLS (filterable)

February 15, 2005 engineering test = 48.7 lb/hr × hr/66.3 TBLS = 0.73 lb/TBLS (filterable)

February 16, 2005 engineering test = 45.4 lb/hr × hr/69.7 TBLS = 0.65 lb/TBLS (filterable)

Average test value = [0.40 + 0.34 + 0.73 + 0.65] ÷ 4 = 0.53 lb/TBLS (filterable)

PM_{10} Emission factor = 0.53 + 0.063 = 0.593 lb/TBLS

Baseline actual emissions:

1,613 TBLS/day × 0.593 lb/TBLS × 1 day/24 hr = 39.9 lb/hr

39.9 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 174.8 tons/yr

Additional reasonably accommodated emissions:

203 TBLS/day × 0.593 lb/TBLS × 1 day/24 hr = 5.02 lb/hr

5.02 lb/hr ×8,760 hr/yr × 1 ton/2000 lb = 22 tons/yr

Projected actual emissions:

2,040 TBLS/day × 0.593 lb/TBLS × 1 day/24 hr = 50.4 lb/hr

50.4 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 221 tons/yr

F.1.2 Sulfur Dioxide (SO_2) Emissions

NCASI TB 884 emission factor = 0.22 lb/TBLS

December 2, 2003 compliance test = 17.7 lb/hr × hr/73.5 TBLS = 0.24 lb/TBLS

August 4, 2004 compliance test = 2.1 lb/hr × hr/68 TBLS = 0.031 lb/TBLS

Average test value = [0.24 + 0.031] ÷ 2 = 0.14 lb/TBLS

Baseline actual emissions:

1,613 TBLS/day × 0.22 lb/TBLS × 1 day/24 hr = 14.8 lb/hr

14.8 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 64.8 tons/yr

Additional reasonably accommodated emissions:

203 TBLS/day × 0.22 lb/TBLS × 1 day/24 hr = 1.9 lb/hr

1.9 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 8.3 tons/yr

Projected actual emissions:

2,040 TBLS/day × 0.22 lb/TBLS × 1 day/24 hr = 18.7 lb/hr

18.7 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 82 tons/yr

F.1.3 Nitrogen Oxide (NO_X) Emissions

NCASI TB 884 emission factor = 1.50 lb/TBLS

December 2, 2003 compliance test = 108.5 lb/hr × hr/73.5 TBLS = 1.48 lb/TBLS

August 4, 2004 compliance test = 86.7 lb/hr × hr/68 TBLS = 1.28 lb/TBLS

Average test value = [1.48 + 1.28] ÷ 2 = 1.38 lb/TBLS

Baseline actual emissions:

1,613 TBLS/day × 1.50 lb/TBLS × 1 day/24 hr = 100.8 lb/hr

100.8 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 441.5 tons/yr

Additional reasonably accommodated emissions:

203 TBLS/day × 1.50 lb/TBLS × 1 day/24 hr = 12.7 lb/hr

12.7 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 55.6 tons/yr

Projected actual emissions:

2,040 TBLS/day × 1.50 lb/TBLS × 1 day/24 hr = 128 lb/hr

128 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 561 tons/yr

F.1.4 Carbon Monoxide (CO) Emissions

NCASI TB 884 emission factor = 1.21 lb/TBLS

December 2, 2003 compliance test = 65.2 lb/hr × hr/73.5 TBLS = 0.89 lb/TBLS

August 4, 2004 compliance test = 109 lb/hr × hr/68 TBLS = 1.60 lb/TBLS

Average test value = [0.89 + 1.60] ÷ 2 = 1.25 lb/TBLS

Additional reasonably accommodated emissions:

203 TBLS/day × 1.25 lb/TBLS × 1 day/24 hr = 10.6 lb/hr

10.6 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 46.4 tons/yr

Baseline actual emissions:

1,613 TBLS/day × 1.25 lb/TBLS × 1 day/24 hr = 84 lb/hr

84 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 368 tons/yr

Projected actual emissions:

2,040 TBLS/day × 1.25 lb/TBLS × 1 day/24 hr = 106 lb/hr

106 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 464 tons/yr

F.1.5 Volatile Organic Compound (VOC) Emissions (Method 25/25A as C)

Emission factor from NCASI TB 884 = 0.09 lb/TBLS

Baseline actual emissions:

1,613 TBLS/day × 0.09 lb/TBLS × 1 day/24 hr = 6.0 lb/hr

6.0 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 26.3 tons/yr

Additional reasonably accommodated emissions:

203 TBLS/day × 0.09 lb/TBLS × 1 day/24 hr = 0.76 lb/hr

0.76 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 3.3 tons/yr

Projected actual emissions:

2,040 TBLS/day × 0.09 lb/TBLS × 1 day/24 hr = 7.7 lb/hr

7.7 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 34 tons/yr

F.1.6 Total Reduced Sulfur (TRS) Emissions (as H_2S)

NCASI TB 849 emission factor (as S) = 0.018 lb/TBLS

Baseline actual emissions:

1,613 TBLS/day × 0.018 lb /TBLS × 1 day/24 hr × 34/32 = 1.3 lb/hr

1.3 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 5.7 tons/yr

Additional reasonably accommodated emissions:

203 TBLS/day × 0.018 lb /TBLS × 1 day/24 hr × 34/32 = 0.16 lb/hr

0.16 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 0.70 tons/yr

Projected actual emissions:

2,040 TBLS/day × 0.018 lb/TBLS × 1 day/24 hr × 34/32 = 1.6 lb/hr

1.6 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 7.0 tons/yr

F.2 No. 3 Smelt Dissolving Tank

Baseline actual production = 1,613 TBLS/day and 588,745 TBLS/yr

Current reasonably accommodated production = 1,816 TBLS/day and 662,840 TBLS/yr

Additional reasonable accommodated production = 1,816 TLS/day – 1,613 TBLS/day
= 203 TBLS/day and 74,095 TBLS/yr

Projected actual production = 2,040 TBLS/day and 744,600 TBLS/yr

F.2.1 Particulate Matter (PM/PM_{10}) Emissions

NCASI TB 884 emission factor = 0.15 lb/TBLS (filterable + condensable)

April 20, 2004 compliance test = 0.10 lb/TBLS (filterable)

Baseline actual emissions:

1,613 TBLS/day × 0.15 lb/TBLS × 1 day/24 hr = 10.1 lb/hr

10.1 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 44.24 tons/yr

Additional reasonably accommodated emissions:

203 TBLS/day × 0.15 lb/TBLS × 1 day/24 hr = 1.3 lb/hr

1.3 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 5.7 tons/yr

Projected actual emissions:

2,040 TBLS/day × 0.15 lb/TBLS × 1 day/24 hr = 12.8 lb/hr

12.8 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 56 tons/yr

F.2.2 Sulfur Dioxide (SO_2) Emissions

NCASI TB 884 emission factor = 0.005 lb/TBLS

Baseline actual emissions:

1,613 TBLS/day × 0.005 lb/TBLS × 1 day/24 hr = 0.34 lb/hr

0.34 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 1.49 tons/yr

Additional reasonably accommodated emissions:

203 TBLS/day × 0.005 lb/TBLS × 1 day/24 hr = 0.04 lb/hr

0.04 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 0.18 tons/yr

Projected actual emissions:

2,040 TBLS/day × 0.005 lb/TBLS × 1 day/24 hr = 0.43 lb/hr

0.43 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 1.9 tons/yr

F.2.3 Nitrogen Oxide (NO_X) Emissions

Emission factor from NCASI TB 884 = 0.020 lb/TBLS

Baseline actual emissions:

1,613 TBLS/day × 0.020 lb/TBLS × 1 day/24 hr = 1.34 lb/hr

1.34 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 5.9 tons/yr

Additional reasonably accommodated emissions:

203 TBLS/day × 0.020 lb/TBLS × 1 day/24 hr = 0.17 lb/hr

0.17 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 0.74 tons/yr

Projected actual emissions:

2,040 TBLS/day × 0.020 lb/TBLS × 1 day/24 hr = 1.7 lb/hr

1.7 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 7.4 tons/yr

F.2.4 Volatile Organic Compound (VOC) Emissions (Method 25/25A as C)

Emission factor from NCASI TB 884 = 0.010 lb/TBLS

Baseline actual emissions:

1,613 TBLS/day × 0.010 lb/TBLS × 1 day/24 hr = 0.67 lb/hr

0.67 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 2.9 tons/yr

Additional reasonably accommodated emissions:

203 TBLS/day × 0.010 lb/TBLS × 1 day/24 hr = 0.08 lb/hr

0.08 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 0.4 tons/yr

Projected actual emissions:

2,040 TBLS/day × 0.010 lb/TBLS × 1 day/24 hr = 0.85 lb/hr

0.85 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 3.7 tons/yr

F.2.5 Total Reduced Sulfur (TRS) Emissions (as H_2S)

NCASI TB 849 emission factor (as S) = 0.012 lb/TBLS

Baseline actual emissions:

1,613 TBLS/day × 0.012 lb/TBLS × 1 day/24 hr = 0.8 lb/hr

0.8 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 3.5 tons/yr

Additional reasonably accommodated emissions:

203 TBLS/day × 0.012 lb/TBLS × 1 day/24 hr = 0.1 lb/hr

0.1 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 0.44 tons/yr

Projected actual emissions:

2,040 TBLS/day × 0.012 lb/TBLS × 1 day/24 hr × 34/32 = 1.0 lb/hr

1.0 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 4.4 tons/yr

F.3 No. 3 Precipitator Mix Tank

Baseline actual production = 1,613 TBLS/day and 588,745 TBLS/yr

Current reasonably accommodated production = 1,816 TBLS/day and 662,840 TBLS/yr

Additional reasonable accommodated production = 1,816 TLS/day – 1,613 TBLS/day
= 203 TBLS/day and 74,095 TBLS/yr

Projected actual production = 2,040 TBLS/day and 744,600 TBLS/yr

F.3.1 Volatile Organic Compound (VOC) Emissions

Emission factor from NCASI TB 884 = 0.0013 lb/TBLS

Baseline actual emissions:

1,613 TBLS/day × 0.0013 lb/TBLS × 1 day/24 hr = 0.0874 lb/hr

0.0874 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 0.383 tons/yr

Additional reasonably accommodated emissions:

203 TBLS/day × 0.0013 lb/TBLS × 1 day/24 hr = 0.011 lb/hr

0.011 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 0.048 tons/yr

Projected actual emissions:

2,040 TBLS/day × 0.0013 lb/TBLS × 1 day/24 hr = 0.11 lb/hr

0.11 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 0.48 tons/yr

F.3.2 Total Reduced Sulfur (TRS) Emissions (as H_2S)

NCASI TB 849 emission factor (as S) = 0.00010 lb/TBLS

Baseline actual emissions:

1,613 TBLS/day × 0.00010 lb/TBLS × 1 day/24 hr = 0.0067 lb/hr

0.0067 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 0.029 tons/yr

Additional reasonably accommodated emissions:

203 TBLS/day × 0.00010 lb/TBLS × 1 day/24 hr = 0.0008 lb/hr

0.0008 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 0.004 tons/yr

Projected actual emissions:

2,040 TBLS/day × 0.00010 lb/TBLS × 1 day/24 hr × 34/32 = 0.0085 lb/hr

0.0085 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 0.037 tons/yr

G.1 Causticizing Area

Baseline actual production = 418 tons CaO/day and 152,570 tons CaO/yr

Current reasonably accommodated production = 586 tons CaO/day and 213,890 tons CaO/yr

Additional reasonably accommodated production = 586 tons CaO/day – 418 tons CaO/day
= 168 tons CaO/day and 61, 320 tons CaO/yr

Projected actual production = 600 tons CaO/day and 219,000 tons CaO/yr

G.1.1 Particulate Matter (PM/PM_{10}) Emissions

G.1.1.1 Fresh Lime Storage Silo:

Average fresh lime make-up = 125 lb CaO/ton CaO

Baseline actual lime make-up = 125 lb CaO/ton CaO × 152,570 ton CaO/yr × 1 ton/2,000 lb
= 9,536 tons CaO

Additional reasonably accommodated lime make-up = 125 lb CaO/ton CaO × 61,320 ton CaO/yr
× 1 ton/2,000 lb = 3,833 tons CaO

Projected actual lime make-up = 125 lb CaO/ton CaO × 219,000 ton CaO/yr × 1 ton/2,000 lb
= 13,688 tons CaO

Truck delivery capacity = 30 tons

Time to unload truck = 2 hours

Use one-half of emission factor from 1994 permit application = 0.02 gr/acf ÷ 2 = 0.01 gr/acf

Use flow rate from 1994 permit application = 3,835 acfm

Baseline actual emissions:

0.01 gr/acf × 3,835 acf/min × 60 min/hr × 1 lb/7,000 gr = 0.33 lb/hr

0.33 lb/hr × 9,536 tons CaO × 2 hr/30 ton CaO × 1 ton/2,000 lb = 0.105 tons/yr

Additional reasonably accommodated emissions:

0.01 gr/acf × 3,835 acf/min × 60 min/hr × 1 lb/7,000 gr = 0.33 lb/hr

0.33 lb/hr × 3,833 tons CaO × 2 hr/30 ton CaO × 1 ton/2,000 lb = 0.042 tons/yr

Projected actual emissions:

0.01 gr/acf × 3,835 acf/min × 60 min/hr × 1 lb/7,000 gr = 0.33 lb/hr

0.33 lb/hr × 13,688 ton CaO/yr × 2 hr/30 ton CaO × 1 ton/2,000 lb = 0.15 tons/yr

G.1.1.2 Slaker:

Emission factor from NCASI TB 884 = 0.022 lb/ton CaO

Baseline actual emissions:

418 ton CaO/day × 0.022 lb/TBLS × 1 day/24 hr = 0.38 lb/hr

0.38 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 1.7 tons/yr

Additional reasonably accommodated emissions:

168 ton CaO/day × 0.022 lb/TBLS × 1 day/24 hr = 0.154 lb/hr

0.154 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 0.67 tons/yr

Projected actual emissions:

600 ton CaO/day × 0.022 lb/TBLS × 1 day/24 hr = 0.55 lb/hr

0.55 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 2.4 tons/yr

G.1.1.3 Total PM/PM$_{10}$ emissions:

Baseline actual emissions:

0.105 tons/yr + 1.7 tons/yr = 1.8 tons/yr

Additional reasonably accommodated emissions:

0.042 tons/yr + 0.67 tons/yr = 0.7 tons/yr

Projected actual emissions:

0.15 tons/yr + 2.4 tons/yr = 2.6 tons/yr

G.1.2 Volatile Organic Compound (VOC) Emissions

Emission factors from NCASI TB 884:

Slaker and Causticizers =	5.70E-2
Lime Mud Precoat Filters =	4.1E-3
Precoat Filter Vacuum Pumps =	1.8E-2
Green Liquor Clarifier =	6.6E-2
Green Liquor Surge Tank =	1.4E-3
Weak Wash Pressure Filter =	7.5E-3
White Liquor Pressure Filter =	5.6E-3
Total Causticizing Area =	1.6E-1 lb/ton CaO

Baseline actual emissions:

418 ton CaO/day × 0.16 lb/ton CaO ×1 day/24 hr = 2.8 lb/hr

2.8 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 12.3 tons/yr

Additional reasonably accommodated emissions:

168 ton CaO/day × 0.16 lb/ton CaO ×1 day/24 hr = 1.12 lb/hr

1.12 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 4.9 tons/yr

Projected actual emissions:

600 ton CaO/day × 0.16 lb/ton CaO ×1 day/24 hr = 4.0 lb/hr

4.0 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 18 tons/yr

G.1.3 Total Reduced Sulfur (TRS) Emissions

Emission factors from NCASI TB 849:

Slaker and Causticizers =	1.2E-3

Emission factors from NCASI TB 701:

Lime Mud Precoat Filters =	5.0E-4
Precoat Filter Vacuum Pumps =	1.1E-3
Green Liquor Clarifier =	6.2E-4

Green Liquor Surge Tank =	8.1E-5
Weak Wash Pressure Filter =	0
White Liquor Pressure Filter =	0
Total Causticizing Area =	3.5E-3 lb/ton CaO

Baseline actual emissions:

418 ton CaO/day × 3.5 E-3 lb/ton CaO × 1 day/24 hr = 0.06 lb/hr

lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 0.26 tons/yr

Additional reasonably accommodated emissions:

168 ton CaO/day × 3.5 E-3 lb/ton CaO × 1 day/24 hr = 0.0245 lb/hr

0.0245 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 0.107 tons/yr

Projected actual emissions:

600 ton CaO/day × 3.5 E-3 lb/ton CaO × 1 day/24 hr = 0.088 lb/hr

0.088 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 0.39 tons/yr

G.2 No. 2 Lime Kiln

Baseline actual production = 418 tons CaO/day and 152,570 tons CaO/yr

Current reasonably accommodated production = 586 tons CaO/day and 213,890 tons CaO/yr

Additional reasonably accommodated production = 586 tons CaO/day – 418 tons CaO/day
= 168 tons CaO/day and 61, 320 tons CaO/yr

Projected actual production = 600 tons CaO/day and 219,000 tons CaO/yr

G.2.1 Particulate Matter (PM) Emissions

NCASI TB 884 emission factor = 0.089 lb/ton CaO (filterable)
= 0.188 lb/ton CaO (condensable)

December 2, 2003 compliance test = 2.1 lb/hr × hr/17 ton CaO = 0.12 lb/ton CaO (filterable)

August 4, 2004 compliance test = 2.1 lb/hr × hr/16.6 ton CaO = 0.13 lb/ton CaO (filterable)

Average test value = [0.12 + 0.13] ÷ 2 = 0.125 lb/ton CaO (filterable)

PM_{10} Emission factor = 0.125 + 0.188 = 0.313 lb/ton CaO

Baseline actual emissions:

418 ton CaO/day × 0.313 lb/ton CaO × 1 day/24 hr = 5.45 lb/hr

5.45 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 23.9tons/yr

Additional reasonably accommodated emissions:

168 ton CaO/day × 0.313 lb/ton CaO × 1 day/24 hr = 2.2 lb/hr

2.2 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 9.64 tons/yr

Projected actual emissions:

600 ton CaO/day × 0.313 lb/ton CaO × 1 day/24 hr = 7.8 lb/hr

7.8 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 34 tons/yr

G.2.2 Sulfur Dioxide (SO_2) Emissions

NCASI TB 884 emission factor = 0.33 lb/ton CaO

December 2, 2003 compliance test = 0.33 lb/hr × hr/17 ton CaO = 0.019 lb/ton CaO

August 4, 2004 compliance test = 0.28 lb/hr × hr/16.6 ton CaO = 0.017 lb/ton CaO

Average test value = [0.019 + 0.017] ÷ 2 = 0.018 lb/ton CaO

Baseline actual emissions:

418 ton CaO/day × 0.33 lb/ton CaO × 1 day/24 hr = 5.75 lb/hr

5.75 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 25.19 tons/yr

Additional reasonably accommodated emissions:

168 ton CaO/day × 0.33 lb/ton CaO × 1 day/24 hr = 2.31 lb/hr

2.31 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 10.12 tons/yr

Projected actual emissions:

600 ton CaO/day × 0.33 lb/ton CaO × 1 day/24 hr = 8.3 lb/hr

8.3 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 36 tons/yr

G.2.3 Nitrogen Oxide (NO_X) Emissions

NCASI TB 884 emission factor = 1.15 lb/ton CaO

December 2, 2003 compliance test = 47.1 lb/hr × hr/17 ton CaO = 2.77 lb/ton CaO

August 4, 2004 compliance test = 24.4 lb/hr × hr/16.6 ton CaO = 1.47 lb/ton CaO

Average test value = [2.77 + 1.47] ÷ 2 = 2.12 lb/ton CaO

Baseline actual emissions:

418 ton CaO/day × 2.12 lb/ton CaO × 1 day/24 hr = 36.9 lb/hr

36.9 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 161.6 tons/yr

Additional reasonably accommodated emissions:

168 ton CaO/day × 2.12 lb/ton CaO × 1 day/24 hr = 14.84 lb/hr

14.84 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 65 tons/yr

Projected actual emissions:

600 ton CaO/day × 2.12 lb/ton CaO × 1 day/24 hr = 53 lb/hr

53 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 232 tons/yr

G.2.4 Carbon Monoxide (CO) Emissions

NCASI TB 884 emission factor = 0.055 lb/ton CaO

December 2, 2003 compliance test = 2.8 lb/hr × hr/17 ton CaO = 0.165 lb/ton CaO

August 4, 2004 compliance test = 1.5 lb/hr × hr/16.6 ton CaO = 0.090 lb/ton CaO

Average test value = [0.165 + 0.090] ÷ 2 = 0.128 lb/ton CaO

Baseline actual emissions:

418 ton CaO/day × 0.128 lb/ton CaO × 1 day/24 hr = 2.23 lb/hr

2.23 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 9.77 tons/yr

Additional reasonably accommodated emissions:

168 ton CaO/day × 0.128 lb/ton CaO × 1 day/24 hr = 0.896 lb/hr

0.896 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 3.9 tons/yr

Projected actual emissions:

600 ton CaO/day × 0.128 lb/ton CaO × 1 day/24 hr = 3.2 lb/hr

3.2 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 14 tons/yr

G.2.5 Volatile Organic Compound (VOC) Emissions (Method 25/25A as C)

NCASI TB 884 emission factor = 0.023 lb/ton CaO

Baseline actual emissions:

418 ton CaO/day × 0.023 lb/ton CaO × 1 day/24 hr = 0.40 lb/hr

0.40 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 1.75 tons/yr

Additional reasonably accommodated emissions:

168 ton CaO/day × 0.023 lb/ton CaO × 1 day/24 hr = 0.16 lb/hr

0.161 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 0.70 tons/yr

Projected actual emissions:

600 ton CaO/day × 0.023 lb/ton CaO × 1 day/24 hr = 0.58 lb/hr

0.58 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 2.5 tons/yr

G.2.6 Total Reduced Sulfur (TRS) Emissions (as H_2S)

NCASI TB 849 emission factor (as S) = 0.059 lb/ton CaO

Baseline actual emissions:

418 ton CaO /day × 0.059 lb/ ton CaO × 1 day/24 hr × 34/32 = 1.09 lb/hr

1.09 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 4.77 tons/yr

Additional reasonably accommodated emissions:

168 ton CaO /day × 0.059 lb/ ton CaO × 1 day/24 hr × 34/32 = 0.44 lb/hr

0.44 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 1.93 tons/yr

Projected actual emissions:

600 ton CaO /day × 0.059 lb/ ton CaO × 1 day/24 hr × 34/32 = 1.6 lb/hr

1.6 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 7.0 tons/yr

H.1 New Woodyard Truck Dumper

Capacity of new truck dumper = 1 truck every 15 minutes

Capacity of 1 truck = 30 tons wood chips

H.1.1 Particulate Matter (PM) Emissions

Emission factor from Florida Pulp and Paper Association (1994) = 0.5 lb/ton chips

Percent fines in purchased chips = 0.2% (FP&P 1994)

Process variability factor = 2 (FP&P 1994)

Potential emissions:

1 truck/15 min × 60 min/hr × 30 tons chips/truck × 0.5 lb/ton chips × 0.002 × 2 = 0.24 lb/hr

0.24 lb/hr × 8,760 hr/yr × 1 ton/2,000 lb = 1.1 tons/yr

Attachment 3

Actual Production Rates

Fiberline
Unbleached Pulp Production
(Air Dried Tons)

Month	Monthly Production Rate	Maximum Daily Production Rate	Average Daily Production Rate
September-03	35,943	1,700	1,198
October-03	47,730	**1,791**	1,540
November-03	45,983	1,776	1,533
December-03	50,233	**1,789**	1,620
January-04	51,464	1,689	1,660
February-04	44,390	1,671	1,585
March-04	47,481	1,693	1,532
April-04	47,800	1,620	1,593
May-04	51,149	1,556	1,650
June-04	43,320	1,551	1,444
July-04	49,082	1,700	1,583
August-04	42,704	1,771	1,378
September-04	46,208	**1,798**	1,540
October-04	44,855	1,663	1,447
November-04	37,177	1,614	1,239
December-04	39,353	1,594	1,269
January-05	43,658	1,631	1,408
February-05	40,189	1,576	1,435
March-05	32,248	1,592	1,040
April-05	44,133	1,599	1,471
May-05	45,184	1,585	1,458
June-05	44,307	1,581	1,477
July-05	42,743	1,558	1,379
August-05	46,585	1,591	1,503
Average Baseline Production			**1,458**
Current Reasonably Accommodated Production		**1,793**	

Fiberline Bleaching System
Bleached Pulp Production
(Air Dried Tons)

Month	Monthly Production Rate	Maximum Daily Production Rate	Average Daily Production Rate
September-03	33,139	1,649	1,105
October-03	44,007	**1,737**	1,420
November-03	42,396	1,723	1,413
December-03	46,315	**1,735**	1,494
January-04	46,622	1,638	1,504
February-04	41,096	1,621	1,468
March-04	44,019	1,642	1,420
April-04	43,693	1,571	1,456
May-04	47,095	1,509	1,519
June-04	38,984	1,504	1,299
July-04	44,557	1,649	1,437
August-04	40,913	1,718	1,320
September-04	46,193	**1,744**	1,540
October-04	44,904	1,613	1,449
November-04	36,891	1,566	1,230
December-04	39,783	1,546	1,283
January-05	41,475	1,582	1,338
February-05	38,179	1,529	1,364
March-05	30,636	1,544	988
April-05	41,926	1,551	1,398
May-05	42,925	1,537	1,385
June-05	42,092	1,534	1,403
July-05	40,606	1,511	1,310
August-05	44,256	1,543	1,428
Average Baseline Production			**1,374**
Current Reasonably Accommodated Production		**1,739**	

No. 3 Recovery Boiler
Tons Black Liquor Solids Production

Month	Monthly Production Rate	Maximum Daily Production Rate	Average Daily Production Rate
September-03	36,706	1,720	1,224
October-03	52,538	1,799	1,695
November-03	51,856	**1,814**	1,729
December-03	52,928	1,786	1,707
January-04	51,409	1,726	1,658
February-04	46,231	1,712	1,651
March-04	47,719	1,736	1,539
April-04	49,229	1,723	1,641
May-04	51,700	1,742	1,668
June-04	47,271	1,708	1,576
July-04	50,982	1,698	1,645
August-04	38,908	1,700	1,255
September-04	49,718	1,695	1,657
October-04	51,014	1,684	1,646
November-04	42,921	1,689	1,431
December-04	48,678	1,687	1,570
January-05	50,794	1,737	1,639
February-05	44,937	1,732	1,605
March-05	48,689	1,691	1,571
April-05	52,148	1,811	1,738
May-05	52,706	**1,816**	1,700
June-05	52,377	**1,818**	1,746
July-05	53,016	1,797	1,710
August-05	53,067	1,807	1,712
Average Baseline Production			**1,613**
Current Reasonably Accommodated Production		**1,816**	

Lime Kiln
Average Lime Production Rate
(tons/day)

Month	Maximum Daily Production Rate	Average Daily Production Rate
September-03	396	324
October-03	419	444
November-03	431	426
December-03	423	439
January-04	435	449
February-04	422	425
March-04	408	431
April-04	382	431
May-04	417	454
June-04	426	387
July-04	389	449
August-04	429	398
September-04	444	472
October-04	498	476
November-04	531	409
December-04	522	394
January-05	**575**	438
February-05	511	361
March-05	463	261
April-05	524	412
May-05	**597**	447
June-05	482	455
July-05	481	421
August-05	**585**	428
Average Baseline Production		**418**
Current Reasonably Accommodated Production	**586**	

Attachment 4
Revised Table 4.1
NSR Applicability

Table 4.1
New Source Review Applicability

Emission Unit	PM_{10}	SO_2	NO_X	CO	VOC	TRS
	Baseline Actual Emissions (tpy)					
Kraft Mill Digester Chip Bin	0	-80	0	0	-4.9	0
Kraft Mill Digester and Blow Tank	0	-33	0	0	-1.9	0
Kraft Mill Turpentine Recovery System	0	-0.80	0	0	-0.0061	0
Kraft Mill Pressure Diffusion Washer	0	-19	0	0	-0.69	0
Kraft Mill Knotting and Screening System	0	-23	0	0	-0.87	0
Kraft Mill Oxygen Delignification System	0	-3.1	0	-12	-1.1	0
Kraft Mill Bleaching System	0	0	0	-213	-12	-0.7
Evaporator Set No. 1	0	-122	0	0	-0.74	0
Recovery Furnace No. 3	-175	-65	-442	-368	-26	-5.7
Smelt Dissolving Tank No. 3	-44	-1.5	-5.9	0	-2.9	-3.5
Precipitator Mix Tank No. 3	0	0	0	0	-0.38	-0.029
Causticizing Area	-1.8	0	0	0	-12	0
Lime Kiln No. 2	-24	-25	-162	-9.8	-1.8	-4.8
Total Baseline Actual Emissions	**- 245**	**- 372**	**- 610**	**- 603**	**- 65**	**- 15**
	Additional Reasonably Accommodated Emissions (tpy)					
Kraft Mill Digester Chip Bin	0	-18	0	0	-1.1	0
Kraft Mill Digester and Blow Tank	0	-7.5	0	0	-0.43	0
Kraft Mill Turpentine Recovery System	0	-0.2	0	0	-0.001	0
Kraft Mill Pressure Diffusion Washer	0	-4.4	0	0	-0.15	0
Kraft Mill Knotting and Screening System	0	-8.2	0	0	-0.53	0
Kraft Mill Oxygen Delignification System	0	-0.71	0	-2.8	-0.24	0
Kraft Mill Bleaching System	0	0	0	-49	-2.8	-0.2
Evaporator Set No. 1	0	-28	0	0	-0.17	0
Recovery Furnace No. 3	-22	-8.3	-56	-46	-3.3	-0.7
Smelt Dissolving Tank No. 3	-5.7	-0.18	-0.74	0	-0.4	-0.44
Precipitator Mix Tank No. 3	0	0	0	0	-0.048	-0.004
Causticizing Area	-0.7	0	0	0	-4.9	0
Lime Kiln No. 2	-9.6	-10	-65	-3.9	-0.70	-1.9
Total Reasonably Accommodated Emissions	**- 38**	**- 86**	**- 122**	**- 102**	**- 15**	**- 3**
	Projected Actual Emissions (tpy)					
Kraft Mill Digester Chip Bin	0	100	0	0	6.1	0
Kraft Mill Digester and Blow Tank	0	41	0	0	2.3	0
Kraft Mill Turpentine Recovery System	0	1.0	0	0	0.0061	0
Kraft Mill Pressure Diffusion Washer	0	24	0	0	0.87	0
Kraft Mill Knotting and Screening System	0	28	0	0	1.0	0
Kraft Mill Oxygen Delignification System	0	3.9	0	15	1.3	0
Kraft Mill Bleaching System	0	0	0	267	15	0.9
Evaporator Set No. 1	0	186	0	0	1.1	0
Recovery Furnace No. 3	221	82	561	464	34	7.0
Smelt Dissolving Tank No. 3	56	1.9	7.4	0	3.7	4.4
Precipitator Mix Tank No. 3	0	0	0	0	0.48	0.037
Causticizing Area	2.6	0	0	0	18	0.39
Lime Kiln No. 2	34	36	232	14	2.5	7.0
New 68% Black Liquor Storage Tank*	0	0	0	0	0.48	0.79
New Woodyard Truck Dumper*	1.1	0	0	0	0	0
Total Projected Actual Emissions	**315**	**504**	**800**	**760**	**87**	**21**
	Project Summary (tons/yr)					
Total Baseline Actual Emissions	**- 245**	**- 372**	**- 610**	**- 603**	**- 65**	**- 15**
Total Reasonably Accommodated Emissions	**- 38**	**- 86**	**- 122**	**- 102**	**- 15**	**- 3**
Total Projected Actual Emissions	**315**	**504**	**800**	**760**	**87**	**21**
Total for Project	**32**	**46**	**68**	**55**	**7**	**3**
NSR THRESHOLD	**15**	**40**	**40**	**100**	**40**	**10**
IS INCREASE SIGNIFICANT?	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**

Table 4.1 (continued)
New Source Review Applicability

Emission Unit	PM_{10}	SO_2	NO_X	CO	VOC	TRS
	Five-Year Contemporaneous Emissions (tons/yr)					
TMP Bleaching System (CY)	5.7	38.2	15.1	32.5	11.5	0
No. 3 Recovery Furnace (CX)	12.7	14.9	22.3	8	0.9	1.3
Wet End Starch System (CW)	3.6	12	5.8	33	0.77	0
WWTP Holding Basin Pump #1 (CV)	2.5	2.3	35.3	7.6	2.9	0
WWTP Holding Basin Pump #2 (CU)	3.3	3.1	22.7	10.1	3.8	0
TTP Pump A*** (CU)	1.9	1.8	13.1	5.9	2.2	0
ASB Pump A*** (CU)	1.9	1.8	13.1	5.9	2.2	0
New Fiberline & PM3 Conversion (CO, CP, CQ, CR, CS, CT)	N/A**	-217	N/A**	-589	7	-40
LVHC System and Condensate Stripper (CN)	N/A**	196	N/A**	201	-404	2
Air Make-up Units (CM)	N/A**	0	N/A**	27	2	0
Paper Mill Improvement Project (CL)	N/A**	0	N/A**	0	7	0
Condensate Collection Tank (CK)	N/A**	0	N/A**	0	0	0
Total Contemporaneous	**31.6**	**53.1**	**127.3**	**-258.0**	**-363.8**	**-36.7**
	Project Summary (tons/yr)					
Total for Project	**32**	**46**	**68**	**55**	**7**	**3**
Total Contemporaneous	**31.6**	**53.1**	**127.3**	**-258.0**	**-363.8**	**-36.7**
Project + Contemporaneous	**64**	**99**	**195**	**- 203**	**- 357**	**- 34**
NSR THRESHOLD	**15**	**40**	**40**	**100**	**40**	**10**
IS INCREASE SIGNIFICANT?	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**

Attachment 5
Compliance Certification

Compliance Certification	
In accordance with Regulation 61-62.5, Standard No. 7.1(d)(1)(B), I certify that all sources are in compliance with all applicable emission limits and standards under the Clean Air Act, with the exception of those so identified in the Title V annual compliance certifications submitted to the Department in accordance with Regulation 61-62.70.6(c)(5).	
Name (signed)	
Name (printed or typed)	Dale L. Herendeen
Date	

Attachment 6
Part I Form

D H E C
PROMOTE PROTECT PROSPER

Part I Permit Application Form
Bureau of Air Quality

Please Refer To Instructions On Back Before Completing This Form

1. Air Permit Number for Existing Plant: **2440-0005**
2. Company Name for Permit: **Bowater Coated and Specialty Papers Division**
3. Mailing Address: **P.O. Box 7**
   City: **Catawba** State: **SC** Zip Code: **29704**
4. Plant Location (Street or Highway) **5300 Cureton Ferry Road**
   City: **Catawba** State: **SC** Zip Code: **29704** County: **York**
5. Person to Contact: **Dale L. Herendeen** Phone No. **803 981-8009**
6. Standard Industrial Classification (SIC) Code for Plant: **2611**
7. Attach the following applicable part(s) for each emission source:
   A. Number of Fuel Burning Applications (Part IIA):
   B. Number of Process Applications (Part IIB): **9**
   C. Number of Incinerator Applications (Part IIC):
   D. Number of Asphalt Plant Applications (Part IID):
   E. Number of Dry Cleaner Applications (Part IIE):
   F. Number of Concrete Batch Plant Permit Applications (Part IIF):
   G. Number of Storage Vessel Permit Applications (Part IIG/Part IIGa)
8. Application Type ☐ Operating Renewal Existing Sources Construction Date:
   ☒ NEW Construction Start Date: **March 2006** Finish Date: **April 2007**
9. Signatures:

I certify, to the best of my knowledge and belief, that no undseriable levels of air pollutants will be created and no applicable standards and/or regulations will be contravened or violated. I understand that any statements and/or descriptions which are found to be incorrect may result in the immediate revocation of any permit issued pursuant to this application.

Company Official Signature | Title/Position | Date

I have placed my signature and seal on the engineering documents submitted, signifying that I accept responsibility for the accuracy of this application as it pertains to DHEC Air Pollution Regulation 61-62.

Professional Engineer Signature | S.C. Registration No. | Date

If the consultant or professional engineer that prepared this application desires a copy of issued permit(s), please complete the information below.

Name/Consulting Firm: **URS Corporation**

Address: **11 Brendan Way, Suite 140** City: **Greenville**

State: **South Carolina** Zip Code: **29615** Phone No.: **(864) 609-9111**

*****INCOMPLETE APPLICATIONS WILL BE RETURNED*****